



PATENT

40554

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of : Confirmation No. 2889  
PAUL D. MARKO et al. : Group Art Unit: 2623  
Serial No.: 09/695,228 : Examiner: Joseph G. Ustaris  
Filed: October 25, 2000 :  
For: METHOD AND APPARATUS FOR :  
IMPLEMENTING FILE TRANSFERS TO :  
RECEIVERS IN A DIGITAL :  
BROADCAST SYSTEM :  
:

**REPLY BRIEF UNDER 37 CFR § 41.41(a)(1)**

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United States Patent and Trademark Office  
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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

For the appeal to the Board of Patent Appeals and Interferences from the decision of February 9, 2007 rejecting claims 1, 2 and 4 - 21 in the above-identified application, Appellant submits the following reply brief in response to the Examiner's Answer of November 16, 2007 in accordance with 37 C.F.R. § 41.41(a)(1).

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**I.       Status of Claims**

There is no dispute as to the status of the claims as set forth in the August 9, 2007 Appeal Brief, and noted as being correct in the November 16, 2007 Examiner's Answer.

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**II.      Grounds of Rejection on Appeal**

There is no dispute as to the grounds of rejection on appeal as set forth in the August 9, 2007 Appeal Brief, and noted as being correct in the November 16, 2007 Examiner's Answer.

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**III. Reply to Examiner's Answer of August 23, 2006**

**A. Rejection of Claims 1, 4-5, 9, 12, 17 and 18 under 35 U.S.C §103(a) as being unpatentable over U.S. Patent No. 6,801,536, to Foster et al (hereinafter "Foster et al") in view of U.S. Patent No. 5,801,781, to Hiroshima et al (hereinafter "Hiroshima et al"),**

Independent claim 1 recites, among other things:

(a) said transmitted broadcast signal being provided with at least one **header** comprising information indicating **the number of said segments that constitute** at least one of said **data files** and information to **identify each of said segments**; and

(b) a processing device ... being programmable to **use said at least one header** in said transmitted broadcast signal **to determine the size** of at least one section in said memory device **to allocate** for storing the data file, to store said segments corresponding to the data file in said allocated section, and **to monitor the progress** of the storage of said segments in said allocated section, said at least one header comprising **data to indicate how much** of said memory device needs to be allocated to store the data file.

Claim 17 similarly recites, among other things:

(a) said transmitted broadcast signal being transmitted with at least one **header** comprising information indicating **the number of said segments that constitute** at least one of said **data files** and **identifying each of said segments**; and

(b) **allocating** a portion of said **memory** device that **corresponds in size to the number of said segments** that constitute said selected data file **as indicated by** said information in said at least one **header**;

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In the “Response to Argument” section of the Examiner’s Answer, the Examiner appears to analogize packets in a transport stream 210 of Foster et al to be data files as claimed, and bytes in those packets to be segments as claimed. The Examiner states that the transport demux (Fig. 2, 220) of Foster et al recovers audio PES packets data from the transport stream 210 according to the MPEG-2 Standard and that the MPEG header is an identifier of each packet in which each packet is a file and bytes within the packet are segments.

Unlike the claimed invention, however, Appellant maintains that the headers of the transport stream packets of Foster et al are not used to determine the size of at least one section in a memory device to allocate for storing a data file, as recited in claims 1 and 17, nor to monitor the progress of the storage of segments in the allocated section, as recited in claim 1.

First, the MPEG header in the transport stream of Foster et al relied on by the Examiner does not comprise data indicating how much of the memory device needs to be allocated to store the data file. On page 4 of the final Office Action mailed February 9, 2007, the Examiner admits that “Foster does not clearly disclose the use of the header comprising data to indicate how much of the memory device need [*sic*] to be allocated to store the data file.” The Examiner therefore relied on Hiroshima et al to purportedly overcome this deficiency.

In applying Hiroshima, however, the Examiner has failed to articulate what aspects of Hiroshima et al purportedly teach:

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“a processing device connected to said memory device and said reception device and being programmable to use said at least one header in said transmitted broadcast signal to determine the size of at least one section in said memory device to allocate for storing the data file,” as recited in claim 1; or similarly

“allocating a portion of said memory device that corresponds in size to the number of said segments that constitute said selected data file as indicated by said information in said at least one header” of the transmitted broadcast signal, as recited in claim 17.

For example, the Examiner relies on the buffer size 122 in Fig. 6 of Hiroshima et al which appears in Fig. 6 to be part of a packet 92; however, the text at column 8, lines 32-33 states that the buffer size 122 is part of a system packet which appears to be sent with each pack 86. Hiroshima et al does not describe whether the buffer size refers to a pack 86, a packet 92, a packet payload 130 or other element. Hiroshima et al is silent regarding what the buffer size 122 corresponds to. The Examiner has not set forth what is regarded in Hiroshima et al as purportedly teaching a segment in a data file as recited in claims 1 and 17 such that a header indicating a number of segments in a data file and having information to identify each segment can be used to allocate memory for the data file. For example, assuming that a packet 92 in Hiroshima et al is regarded as arguably teaching a segment in a pack 86 that is, in turn, assumed arguably to be a data file, then the system header 90 does not contain information to identify each of the packets 92,...,94 nor the number of packets in the data file. By contrast, claims 1 and 17 recite, among other things, a header comprising information indicating the number of said segments that constitute at least one of said data files and information to identify each of said segments, and allocating memory using said

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header, among other elements. The Examiner instead merely relies on the statement in the Examiner's Answer that "reading the claims in the broadest sense, Hiroshima et al does meet that limitation in the claims."

In addition, Fig. 6 of Hiroshima et al refers to a conversion process for changing an MPEG1 system stream to resultant data as an MPEG2-TS (see Hiroshima et al, column 7, line 58 to column 8, line 7). Thus, the system header 90 with buffer size 122 used in the conversion process do not relate in any way to a transmitted broadcast signal having data files partitioned into segments and a header as claimed that can be used to allocate memory once the transmitted broadcast signal is received. Appellant respectfully submits that there is no suggestion to combine the teachings of Foster et al and Hiroshima et al as advanced by the Examiner except from using Appellant's invention as a template through hindsight reconstruction of Appellant's claims.

Returning to the Examiner's reliance on Foster et al, even if an MPEG-2 header arguably relates bytes in packets to respective ones of the packets in a transport stream so as to be broadly interpreted as analogizing the header as claimed for indicating segments that constitute data files, Foster et al fails to teach to teach monitoring progress of the storage of the segments in the allocated section as recited in claim 1, as well as determining how much memory needs to be allocated to store the data file, as recited in claims 1 and 17. The Examiner continues to rely on columns 6 and 8 of Foster et al in the Response to Argument section of the Examiner's Answer (e.g., see pages 17 - 19 of the Examiner's Answer) to purportedly teach these operations. In particular, the Examiner refers to the "BTI value" on pages 18 and 19 of the Examiner's Answer, and states that queuing blocks of audio and video data to buffers until a BTI value is reached "effectively determines when data files have been

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received.... In doing so, the system inherently monitor [sic] the receiving data file so to be able to determine which data file has not been received.”

Appellant respectfully disagrees. First, the Examiner is relying on a BTI value that is generated at the STB and therefore is not part of the header in a transmitted broadcast signal. Second, the BTI value does not identify each block therein as the Examiner seems to suggest.

More specifically, the BTI value is not in a header of a transmitted broadcast signal and therefore does not teach elements of the inventions recited in claims 1 and 17 such as allocating memory using a header as claimed, nor monitoring progress of storage of segments using a header as claimed in claim 1. Instead, Foster et al discloses byte-to-interrupt (BTI) signals that are rolling interrupts generated at the set-top box (STB) for application to received audio and video PES streams in the creation and queuing of sub blocks as clearly described in column 6, lines 1-45 of Foster.

Consider, for example, the following:

- With reference to the STB depicted in Fig. 2 of Foster et al, the transport demultiplexer 220 has buffers for receiving the transport packets. Data is then queued in buffers 240A and 240V. “The respective BTI values establish when each stage of the buffers 240A and 240V has been filled and the next stage of each buffer is read out to multiplexer 260 in the order the interrupts are issued.” See column 6, lines 13-17 of Foster et al.
- The BTI is a rolling interrupt that controls when sub blocks are formed from the received streams at the STB. See column 6, lines 23-25 of Foster et al. which states that the BTI “indicates when a given number of bytes (in 256 byte increments), forming sub blocks have been sent to a queue.”

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- “Upon the issuance (330 of FIG. 3) of each BTI interrupt and as a data sub block is sent to multiplex buffer 280, **a header is created** for each sub block that contains the length of the header and sub blocks, the system time clock value or other clock reference, a pointer to the previous sub block, and a header ID. **This information for the header is developed concurrently with the storage of data sub blocks** to multiplex buffer 280” **in the STB** of FIG. 2 , as indicated at block 350 of Fig. 3, **and the headers built**, as indicated at block 340.
- See blocks 310 and 340 in Fig. 3 of Foster et al which clearly indicates reception of the transport stream at the STB prior to building sub block headers.

As clearly stated above, the BTI is not in the transport stream but is rather created at the STB, and therefore does not teach the inventions recited in claims 1 and 17. Thus, Appellant has not misinterpreted Foster et al even though the Examiner states that Appellant “again and again misconstrues Foster reference.”

**B. Rejection of Independent Claim 13 and Dependent claims 14 and 15 as unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,801,536, to Foster et al., in view of U.S. Patent No. 5,815,671, to Morrison.**

On page 17 of the Examiner's Answer, the Examiner relies on column 7, lines 12-18 of Foster et al to teach headers identifying the total number of segments as claimed, and states that an STC code exists in this header to teach the first and second fields recited in claim 13. Applicants respectfully submit, however, that the header described at column 7,

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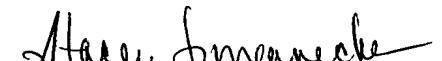
lines 12-18 of Foster et al is applied to sub blocks created at the STB from received data using BTI interrupts as clearly described in column 6 of Foster et al and at column 7, lines 5-18 and Fig. 4. Thus, the sub block header 412 indicating total data block size is not in the transmitted stream but rather is created at the STB and can be of courser granularity as explained in Foster et al at column 5, lines 5-6, column 6, line 66 through column 7, line 8 and column 7, lines 24-27.

Further, Applicants respectfully submit that the STC is not in the sub block header 412 as the Examiner suggests. As stated in Foster et al at column 7, lines 65 through column 8, line 6 and at column 8, lines 57-61, a local STC is computed at the STB based on the PCR received from the transport stream, stored and periodically updated. The STC, however, is not itself a part of the transport stream, nor is it disclosed in Foster et al as part of a header 412 for sub blocks of data created at the STB from the received transport stream.

### C. Conclusion

For the reasons presented herein, Applicants submit that claims 1, 2 and 4 - 21 are not rendered obvious under 35 U.S.C. § 103(a) by the cited references of record. Accordingly, reversal of the final rejection is requested and allowance of claims 1, 2 and 4 – 21 is respectfully requested.

Respectfully submitted,

  
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